

Surface Mount Rectifiers
Reverse Voltage 50 to 1000 Volts Forward Current 1.0 Ampere

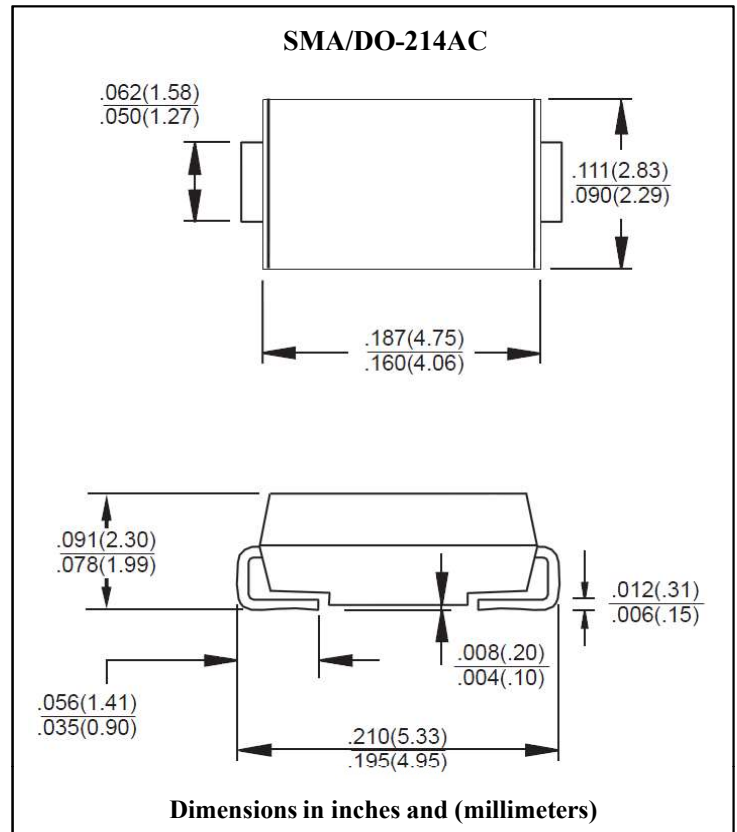
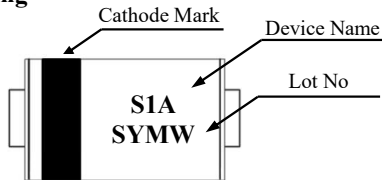
Features

- For surface mounted application
- Glass passivated junction chip
- Low forward voltage drop
- High current capability
- Easy pick and place
- High surge current capability
- Plastic material used carries underwriters laboratory classification 94V-0
- High temperature soldering : 260°C /10 seconds at terminals

Mechanical Data

- Case : Molded plastic
- Terminals : Solder plated
- Polarity : Indicated by cathode band
- Packaging : 12mm tape per EIA STD RS-481
- Weight : 0.064gram

Marking



Maximum Ratings & Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified
Single phase half wave 60 HZ, resistive or inductive load
For capacitive load, derate current by 20%

| Parameter | Symbol | S1A | S1B | S1D | S1G | S1J | S1K | S1M | Unit | Remark |
|---|---------------|-------------|-----|-----|-----|-----|-----|------|-------|----------|
| Maximum Repetitive Peak Reverse Voltage | V_{RRM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V | |
| Maximum RMS Voltage | V_{RMS} | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V | |
| Maximum DC Blocking Voltage | V_{DC} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V | |
| Maximum Average Forward Rectified Current | $I_F(AV)$ | 1.0 | | | | | | | A | |
| Peak Forward Surge Current 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC Method) | I_{FSM} | 30 | | | | | | | A | |
| Maximum Instantaneous Forward Voltage @ 1.0A | V_F | 1.1 | | | | | | | V | |
| Maximum DC Reverse Current at Rated DC Blocking Voltage | I_R | 5.0 | | | | | | | uA | Ta=25°C |
| | | 50 | | | | | | | uA | Ta=125°C |
| Maximum Reverse Recovery Time | t_{rr} | 1.8 | | | | | | | us | Note 1 |
| Typical Junction Capacitance | C_J | 12 | | | | | | | pF | Note 2 |
| Typical Thermal Resistance | $R_{th(j-l)}$ | 27 | | | | | 30 | | °C /W | Note 3 |
| | $R_{th(j-a)}$ | 75 | | | | | 85 | | °C /W | |
| Operation Junction Temperature Range | T_J | -55 to +150 | | | | | | | °C | |
| Storage Temperature Range | T_{STG} | -55 to +150 | | | | | | | °C | |

Note 1. Reverse Recovery Time Test Conditions : $I_F=0.5A$, $I_R=1.0A$, $I_{RR}=0.25A$
 Note 2. Measured at 1MHz and Applied Reverse Voltage of 4.0Volts D.C.
 Note 3. Mount on Cu-Pad Size 5mm×5mm on P.C.B.



Ratings and Characteristics Curves ($T_a=25^\circ\text{C}$ unless otherwise noted)

Fig.1 Forward Current Derating Curve

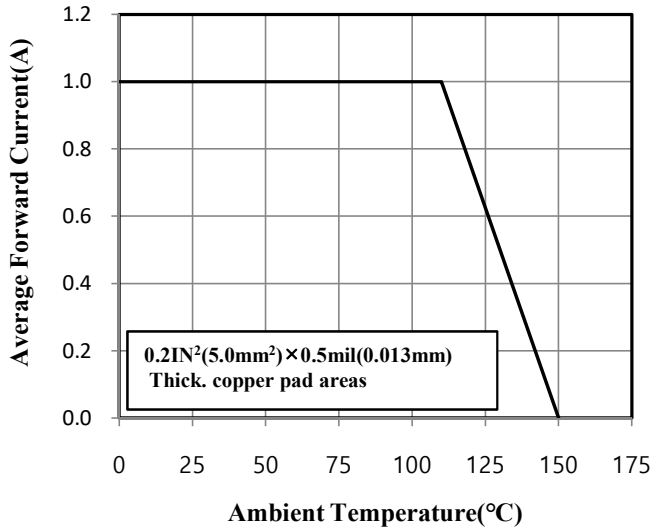


Fig.2 Maximum Non-Repetitive Peak Forward Surge Current

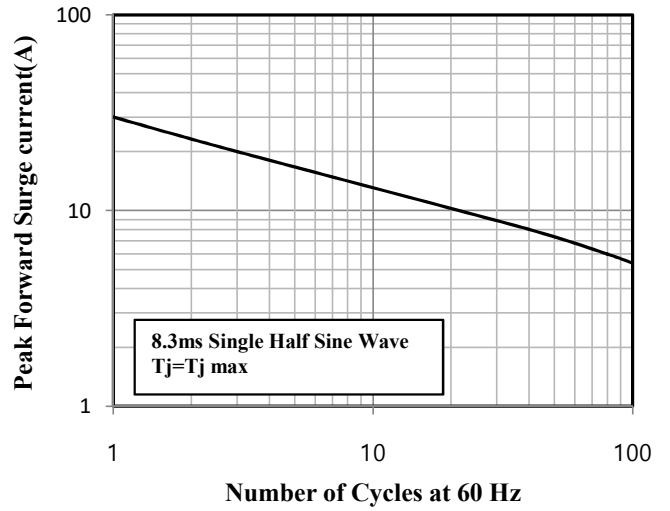


Fig.3 Typical Instantaneous Forward Characteristics

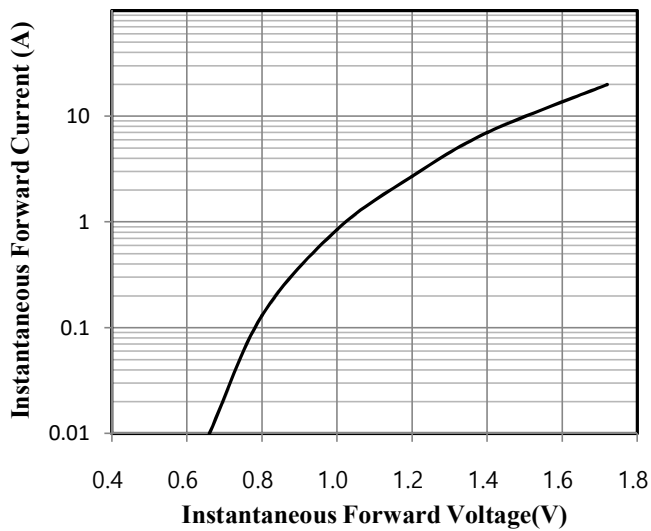


Fig.4 Typical Junction Capacitance

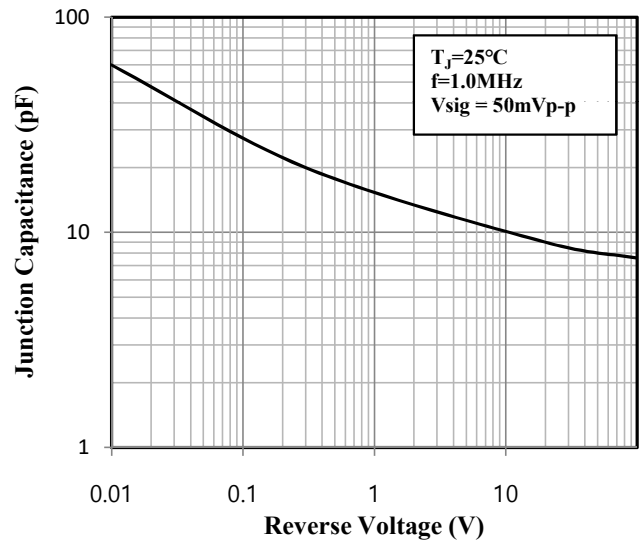


Fig.5 Typical Reverse Characteristics

